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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/743,303	12/23/2003	Cheul Kyung Han	LT-0034	7853
34610 7590 11/05/2007 KED & ASSOCIATES, LLP P.O. Box 221200 Chantilly, VA 20153-1200			EXAMINER HALEY, JOSEPH R	
			ART UNIT 2627	PAPER NUMBER
			MAIL DATE 11/05/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/743,303	HAN, CHEUL KYUNG	
	Examiner	Art Unit	
	Joseph Haley	2627	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 August 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5, 7-11, 13-21 and 23-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 7-11, 13-21 and 23-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Information Disclosure Statement

The Office Actions submitted in the IDS of 8/30/07 and the IDS of 8/2/07 but have been lined through so as to not be printed on the front of any patent.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 2, 4, 5, 7, 8, 10, 11, 14, 15, 17-21 and 23-28 are rejected under 35 U.S.C. 102(e) as being anticipated by Sasaki et al. (US 6614739).

In regard to claim 1, Sasaki et al. teaches an optical pick-up for recording data; driver circuit for generating a driving signal for driving the optical pick-up to adjust an optical power level of the optical pick-up (fig. 2 elements 35-37); and control circuit for generating a main pulse and a sub pulse for the driving signal the sub pulse having a prescribed width that at least partially overlaps the main pulse (fig. 2 elements 32-34), wherein the sub pulse is generated at a prescribed amount of time prior to generating the main pulse (see fig. 7) the prescribed amount of time corresponding to a predetermined portion of a duty ratio of said sub pulse, and wherein the driving signal rises substantially to a first level during the prescribed amount of time prior to when the

main pulse is generated, and the driving signal maintains substantially said first level for a remaining time of the prescribed width of the sub pulse (see fig. 7. The LD output signal rises to a level and maintains this level throughout).

In regard to claim 2, Sasaki et al. teaches wherein the sub pulse overlaps the main pulse for approximately the prescribed amount of time (see fig. 7. The EQEFM pulse starts approximately in the middle of the ODP_FIRST pulse).

In regard to claims 4 and 10, Sasaki et al. teaches wherein the driver means is driven by signals indicative of a magnitude and ON/OFF timings of the main pulse and signals indicative of a magnitude and ON/OFF timings of the sub pulse (see fig. 2).

In regard to claim 5, Sasaki et al. teaches a storage circuit for storing variables indicative of respective start and end times and respective magnitudes of the main pulse and the sub pulse according to sizes of respective recording pits, wherein the control means generates the main pulse and the sub pulse using a subset of the variables corresponding to each size of the recording pits (column 7 lines 66-67 and column 8 lines 1-7).

In regard to claim 7, Sasaki et al. teaches a storage circuit for storing variables indicative of respective start and end times and respective magnitudes of the main pulse and the sub pulse according to individual disk manufacturers, wherein the control means generates the main pulse and the sub pulse using corresponding variables of the variables for each disk manufacturer (column 11 lines 5-14).

In regard to claims 8, 11, and 21 see claim 1 rejection above.

In regard to claim 14, Sasaki et al. teaches detecting the duty ratio based on timing data stored on the optical storage medium (column 11 lines 5-10).

In regard to claims 15, 17, 18, 20 and 23-27, see claim 14 rejections above.

In regard to claim 19, wherein said information includes a start time of a lead-out area, a start time of a lead-in area or disc id from a table of contents stored on the medium (column 11 lines 5-14. The manufacturer must be read from a table of contents).

In regard to claim 28, Sasaki et al. teaches wherein the driving signal maintains substantially the first level throughout the duration of the main pulse (see fig. 7).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sasaki et al. in view of Yokoi et al. (US 5732062).

In regard to claims 3 and 9, Sasaki et al. teaches all the elements of these claims except wherein the sub-pulse has the same signal level as that of the main pulse, and the sub pulse having the same width regardless of the size of the pit.

Yokoi et al. teaches wherein the sub-pulse has the same signal level as that of the main pulse and the sub pulse has the same width regardless of the size of the pit (fig. 4).

The two are analogous art because they both deal with the same field of invention of recording on optical discs.

At the time of invention it would have been obvious to one of ordinary skill in the art to provide the apparatus of Sasaki et al. with the pulse level and width of Yokoi et al. The rationale is as follows: At the time of invention it would have been obvious to provide the apparatus of Sasaki et al. with the pulse level and width of Yokoi et al. because it would eliminate variables from the recording operation, making the operation faster.

Claims 13 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sasaki et al.

In regard to claims 13 and 16, Sasaki et al. teaches all the elements of these claims except a duty ratio of 50% and wherein said width is equal to $T/32$ (Sasaki et al. teaches changing the pulse width according to the EFM signal, see column 8 lines 1-7).

At the time of invention it would have been obvious to one of ordinary skill in the art to provide the apparatus of Sasaki et al. with a duty ratio of 50% and a width equal to $T/32$. The rationale is as follows: At the time of invention it would have been obvious to provide the apparatus of Sasaki et al. with a duty ratio of 50% and a width equal to $T/32$ because these results are optimization of a result effective variable.

Response to Arguments

Applicant's arguments filed 8/30/07 have been fully considered but they are not persuasive. Applicant argues on page 11 that Sasaki et al. does not teach "wherein the

driving signal rises substantially to a first level during the prescribed amount of time prior to when the main pulse is generated, and the driving signal maintains substantially said first level for a remaining time of the prescribed width of the sub pulse". However, the examiner maintains this rejection because the optical output of Sasaki et al. reaches a first level when the sub-pulse is applied. When the main pulse is applied the optical output rises to a new level. While the output does not stay at the same level, it still maintains the first level. By staying above a first level, the optical output of Sasaki et al. maintains this first level.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph Haley whose telephone number is 571-272-0574. The examiner can normally be reached on M-F 8:30am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Korzuch can be reached on 571-272-7589. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

jrh

/William Korzuch/
SPE, Art Unit 2627